

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau

(43) International Publication Date  
15 January 2004 (15.01.2004)

PCT

(10) International Publication Number  
WO 2004/005349 A3

- (51) International Patent Classification<sup>7</sup>: C07K 16/28, (74) Agent: SONN & PARTNER PATENTANWÄLTE,  
16/30, A61K 39/395, A61P 35/00 Riemergasse 14, A-1010 Vienna (AT).
- (21) International Application Number: (81) Designated States (*national*): AE, AG, AL, AM, AT, AU,  
PCT/EP2003/006912 AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,  
(22) International Filing Date: 30 June 2003 (30.06.2003) CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,  
(25) Filing Language: English GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,  
(26) Publication Language: English SD, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,  
(30) Priority Data: A 995/2002 3 July 2002 (03.07.2002) AT MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC,  
(71) Applicant (for all designated States except US): IGENEON KREBS-IMMUNTHERAPIE SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG,  
FORSCHUNGS-UND ENTWICKLUNGS-AG US, UZ, VC, VN, YU, ZA, ZM, ZW.  
[AT/AT]; Brunner Strasse 69, Objekt 3, AT-1230 Vienna (AT).
- (72) Inventors; and  
(75) Inventors/Applicants (for US only): LOIBNER, Hans [AT/AT]; Heimgasse 23, A-1238 Vienna (AT). HIMMLER, Gottfried [AT/AT]; Colloredogasse 29, A-1180 Vienna (AT). PUTZ, Thomas [AT/AT]; Mentlgasse 7/42, A-6020 Innsbruck (AT). FREISSLUTH, Michael [AT/AT]; Billrothstrasse 68, A-1190 Vienna (AT). KLINGER, Markus [AT/AT]; Lerchenfelder Strasse 139/20, A-1070 Vienna (AT). FARHAN, Hesso [AT/AT]; Linzer Strasse 300/10, A-1140 Vienna (AT).

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CR, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

## Declaration under Rule 4.17:

— of inventorship (Rule 4.17(iv)) for US only

## Published:

— with international search report

(88) Date of publication of the international search report:  
28 October 2004

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

A3

WO 2004/005349

(54) Title: PREPARATION BASED ON AN ANTIBODY DIRECTED AGAINST A TUMOR-ASSOCIATED GLYCOSYLATION SUCH AS LEWIS STRUCTURES

(57) Abstract: The invention relates to the use of a preparation based on -an antibody directed against a tumor-associated glycosylation for preparing a medicament for the prophylactic and/or therapeutic treatment for the reduction or inhibition, respectively, of the growth of tumor cells in a cancer patient, as well as to a pharmaceutical preparation containing an antibody directed against a tumor-associated glycosylation. Moreover, the invention relates to a preparation for pharmaceutical and/or diagnostic use, a diagnostic method and an agent for determining the risk of metastasis formation in a cancer patient, as well as a method of producing a preparation based on a body fluid or tissue, in each case using the antibody directed against a tumor-associated glycosylation.

BEST AVAILABLE COPY

## INTERNATIONAL SEARCH REPORT

International Application No  
PCT/EP 03/06912

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 C07K16/28 C07K16/30 A61K39/395 A61P35/00

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 C07K A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, BIOSIS, MEDLINE

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 528 767 A (SANDOZ AG ;SANDOZ LTD (CH); SANDOZ AG (DE)) 24 February 1993 (1993-02-24) page 1, line 1 - line 26; claims 1-17 ---	1-4, 8-10, 12-21
X	DETTKE M ET AL: "Different types of FCgamma-receptors are involved in anti-Lewis Y antibody induced effector functions in vitro" -BRITISH JOURNAL OF CANCER, vol. 82, no. 2, January 2000 (2000-01), pages 441-445, XP001172841 ISSN: 0007-0920 page 441, left-hand column, line 1 -right-hand column, line 17 ---	1-4, 8-10
Y	---	5-7, 11-14 -/-

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

## \* Special categories of cited documents :

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*&\* document member of the same patent family

Date of the actual completion of the international search

10 November 2003

Date of mailing of the international search report

16/12/2003

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl.  
Fax: (+31-70) 340-3016

Authorized officer

Le Flao, K

## INTERNATIONAL SEARCH REPORT

International Application No  
PCT/EP 03/06912

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	BASU A ET AL: "Presence of tumor-associated antigens in epidermal growth factor receptors from different human carcinomas." CANCER RESEARCH. UNITED STATES 15 MAY 1987, vol. 47, no. 10, 15 May 1987 (1987-05-15), pages 2531-2536, XP008024280 ISSN: 0008-5472 cited in the application page 2531, left-hand column	5-7, 11-14
X	GOOI H C ET AL: "Monoclonal antibody (EGR/G49) reactive with the epidermal growth factor receptor of A431 cells recognizes the blood group ALeb and ALey structures." MOLECULAR IMMUNOLOGY. ENGLAND JUN 1985, vol. 22, no. 6, June 1985 (1985-06), pages 689-693, XP008024281 ISSN: 0161-5890 page 689, left-hand column -right-hand column	22-24
X	BRICH Z ET AL: "PREPARATION AND CHARACTERIZATION OF A WATER SOLUBLE DEXTRAN IMMUNOCOJUGATE OF DOXORUBICIN AND THE MONOCLONAL ANTIBODY (ABL 364)" JOURNAL OF CONTROLLED RELEASE, ELSEVIER SCIENCE PUBLISHERS B.V. AMSTERDAM, NL, vol. 19, no. 1 / 3, 1 March 1992 (1992-03-01), pages 245-257, XP000261548 ISSN: 0168-3659 abstract page 245, left-hand column -page 246, left-hand column page 246, right-hand column, line 39 -page 247, left-hand column, line 4	1,2
A	WO 01 00245 A (GENENTECH INC) 4 January 2001 (2001-01-04) examples 1-13	1-24
P,X	WO 02 092771 A (BURGESS ANTHONY WILKS ;SCOTT ANDREW MARK (AU); PANOUSIS CON (AU);) 21 November 2002 (2002-11-21) page 2, line 1 -page 6, line 2 page 11; claims 1-64	1-24

## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/EP 03/06912

### Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1.  Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:  

Although claim 22 is directed to a diagnostic method practised on the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
2.  Claims Nos.: because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3.  Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

### Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1.  As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2.  As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3.  As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4.  No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

#### Remark on Protest

The additional search fees were accompanied by the applicant's protest.

No protest accompanied the payment of additional search fees.

## INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/EP 03/06912

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
EP 0528767	A	24-02-1993		AT 188708 T CA 2076432 A1 DE 69230545 D1 DE 69230545 T2 DK 528767 T3 EP 0528767 A1 ES 2145004 T3 GR 3032944 T3 JP 5336989 A PT 528767 T US 5562903 A	15-01-2000 22-02-1993 17-02-2000 06-07-2000 17-04-2000 24-02-1993 01-07-2000 31-07-2000 21-12-1993 30-06-2000 08-10-1996
WO 0100245	A	04-01-2001		AU 5632900 A AU 5763200 A BR 0012196 A BR 0012198 A CA 2370466 A1 CA 2376596 A1 CN 1387444 T CN 1370082 T CZ 20014596 A3 DE 10084743 T0 EP 1191944 A2 EP 1189641 A2 GB 2368796 A HU 0201616 A2 HU 0201695 A2 JP 2003503365 T JP 2003503366 T NO 20016329 A TR 200103756 T2 WO 0100244 A2 WO 0100245 A2 US 2003086924 A1 ZA 200109786 A ZA 200110263 A	31-01-2001 31-01-2001 19-03-2002 02-04-2002 04-01-2001 04-01-2001 25-12-2002 18-09-2002 12-02-2003 14-08-2002 03-04-2002 27-03-2002 15-05-2002 28-08-2002 28-09-2002 28-01-2003 28-01-2003 25-02-2002 21-06-2002 04-01-2001 04-01-2001 08-05-2003 28-11-2002 13-12-2002
WO 02092771	A	21-11-2002	WO	02092771 A2	21-11-2002